

# Texas Animal Health Commission



## Authorized Personnel Course Part 2

Brucellosis, Bovine TB,  
Trichomoniasis,  
Scabies and Mange Mites



# Brucellosis Eradication Program in Texas



Presented by:  
Texas Animal Health Commission



# *Brucella* species

*Brucella suis*  
swine, reindeer



*Brucella abortus*  
cattle, bison & elk



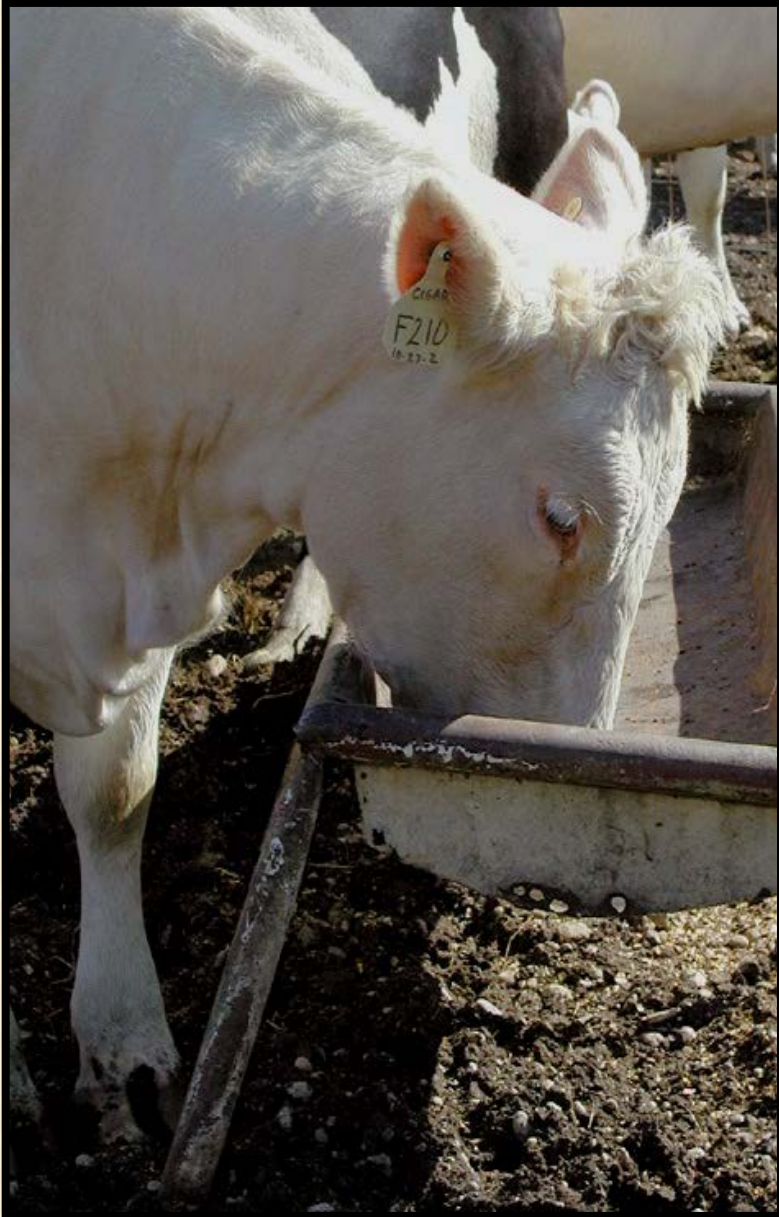
*Brucella melitensis*  
goats



# TX Achieves Brucellosis Class Free Status February 1, 2008 USDA lifts high risk status in Feb. 2013



# Vaccination



- Strain 19
  - (Not used since 1996)
- RB-51
  - Tattoo – “R, shield, # yr”
  - (approximately 250,000 @yr.)
- **14 western states require female cattle entering to be vaccinated**
- Brucella Abortus RB 51 Bangs Vaccine by Colorado Serum available from major veterinary distributors



# Changes in National Surveillance Bovine Brucellosis

- All states in U.S. considered brucellosis free by USDA, with Designated Surveillance Areas around Yellowstone park (GYA) in parts of Idaho, Wyoming, and Montana
- Slaughter surveillance in U.S. being reduced from all test eligible slaughter cattle to 1.9 million samples/year
- Texas conducts additional surveillance at state expense – TAHC lab running extra samples at no charge
- Texas tested 3 million samples alone, in 2011 – over 1 million slaughter and 1 million market cattle sold per yr.



# Changes in Texas Surveillance Bovine Brucellosis

- Mandatory testing for change of ownership suspended in 2011 due to budget concerns during drought
- 3 markets in Texas still test all cattle for brucellosis, and another group (10+/-) test all breeding type cattle – approximately 50,000 per year vs. 1 million total adults
- 2 major slaughter plants still test – L&H in San Antonio, and Lone Star in San Angelo – approximately 500,000
- All state slaughter plants still testing
- Approximately 100 brucellosis free herds
- Diagnostic testing by veterinarians



# Brucellosis Threats to Texas Herd

- Importation from Greater Yellowstone Area (GYA)— incubating cow, latently infected heifers
- Cattle smuggled in from Mexico, or cattle walking across the border in remote areas
- Undetected herd already in the state. Reduced surveillance will delay detection
- *Brucella suis* complicates the diagnostic picture and raises zoonotic concern



# Brucellosis Threats to Texas Herd

- Recent genetic fingerprint studies indicate a link between *B. abortus* found in elk and bison in GYA and an affected cattle herd in Texas (2004, depopulated)
- Texas Animal Health Commission adopts rules for post entry test of cattle from GYA
- USDA to conduct risk analysis



# Beware of Swine Brucellosis!



Brucellosis-infected feral swine are a threat to cattle!

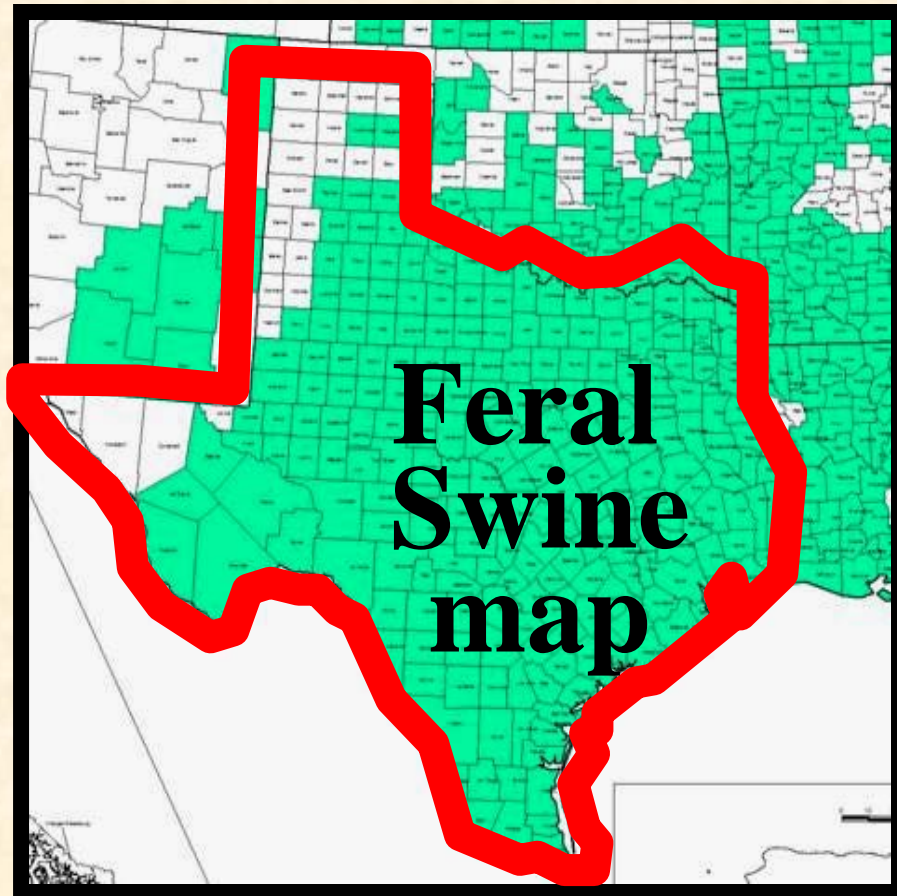
(66 *B. suis* infected cattle to date in last 6 years) including 1 dairy infected twice

Texas still averages 100 test positive cattle per year

Herd tests may be necessary to rule out *Brucella abortus*



Swine brucellosis  
also is transmissible  
to humans and dogs!



# Bovine Tuberculosis (TB)



# Characteristics of Bovine TB Infection

- Bacterial
- Chronic
- Slowly progressive tubercles
- Usually clinically inapparent
- Public health impact
  - ▶ Meat condemnation
  - ▶ Human infection



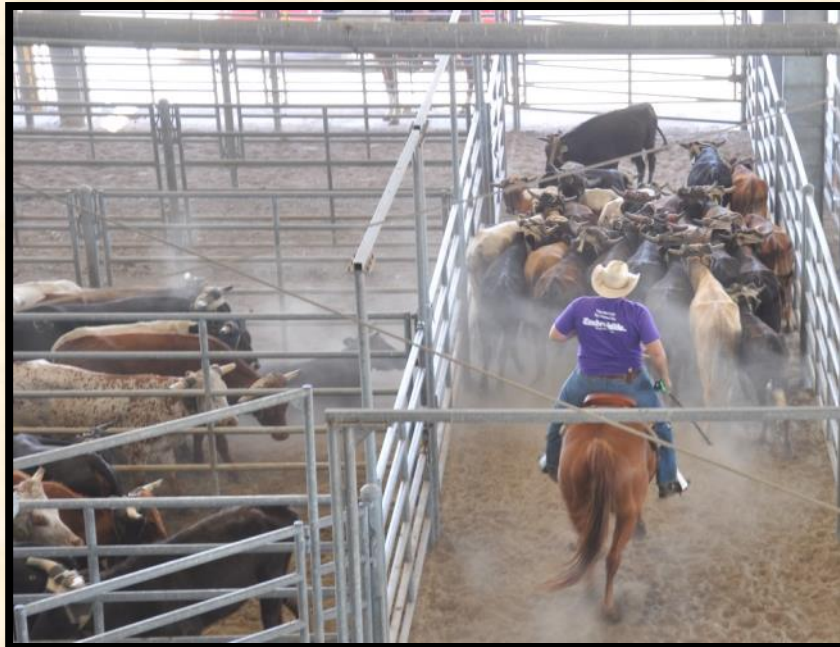
# TB in Texas

- Texas is classified as TB Free
- There are still lesioned animals found routinely at slaughter (10-15 @ yr)
  - Primarily Mexican origin feeder cattle
- Tracing these animals is time consuming and costly
  - Working on one trace for nearly two years



# TB Threats to Texas

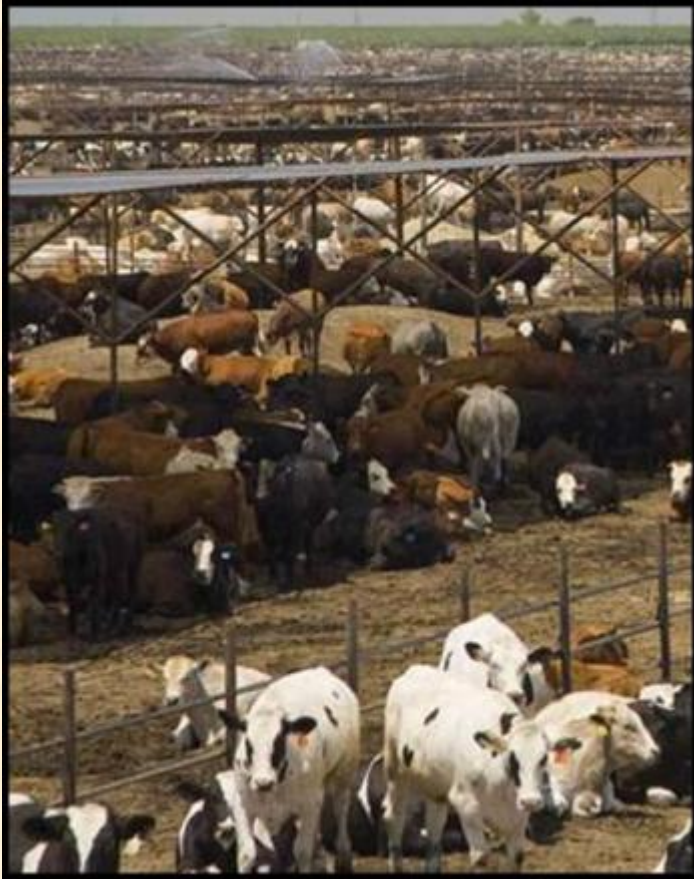
- Mexican feeder cattle (1 million @ yr)
- Mexico exhibition (rodeo) cattle (5,000)
- US dairy cattle  
Dairy calf rearing facilities



# Mexican Origin Cattle “M-branded”



# Risky Practice



Commingling Mexican-origin steers with replacement cattle or breeding cattle in feed yards. Texas Cattle Feeders developed voluntary guidelines for feeders.



# Mexican Origin Event Cattle preventative measures in Texas

- Texas requires rodeo cattle entering from Mexico to have a post-entry test performed by a US veterinarian 60 days after entry
- M-branded rodeo cattle must get entry permit to enter Texas
- M- brands must have proof of negative test at all times or can only be sold to slaughter or for terminal feeding
- M-brands should not be fed fence to fence with potential breeding animals in drylots
- TAHC inspectors check papers on M-brands at rodeos and inspect feedyards



# Risky Practices

Resting or grazing Mexican-origin steers on pastures with breeding cattle



# Dairy Calf Ranches

- 4 TAC 43.6 – Establishes regulatory requirements for dairy calf rearing facilities
- Defines facility as greater than 10 calves
- Establishes recordkeeping requirements for both TB testing of calves and records on feed milk sources



# Why is Texas Doing This?



- Prior troubles with TB epi traces involving calf ranches
- Likely spread of disease – especially smaller operators
- Likely co-mingling of animals from different sources
- Smaller operators may be transient in nature
- Dairy Industry support in Texas

# Dairy Calf Health Survey Process

- Performed by field inspectors
- Monthly at first until relationship developed
- Quarterly Inspections after that
- High risk designation will increase inspection frequency
- Regional Veterinarian reviews form for risk factors



# Calf Ranch Risk Factors

- Rule violation – no ID, entry violation, etc...
- Feeding unpasteurized waste milk/colostrum or no records on milk sources
- Co-mingling or presence of M-brands on facility
- Inability to link tags to source or incomplete record keeping (5yrs)
- Out of state sources or unknown sources
- Weak biosecurity processes – hutches, bottles, general health issues
- Any unsanitary practices
- Other factors based on veterinary science or sound epidemiological principles



# Texas TB Mitigation Processes

- Mandatory ID prior to movement
- Mandatory TB test for all dairy breeding animals at time of entry (except form Accredited Free herds)
- Calves less than 2 months enter under permit to be tested at 2 months of age
- Voluntary relationship with feeder industry to discourage feeders who may have M-brands fence to fence with breeding animals in dry lot
- Calf Ranch Survey process
- Tested all dairies in 2004-2005
- ***Quarantined Calf Ranch Process development***



# El Paso Area TB Surveillance

- HB 1081 – requires TAHC to assess TB in the Movement Restriction Zone established in 2006
- Surveillance testing
  - All cattle
  - Statistical sample of small ruminants
  - Exotics and cervids
  - Wildlife (coyotes/cervids/feral swine)

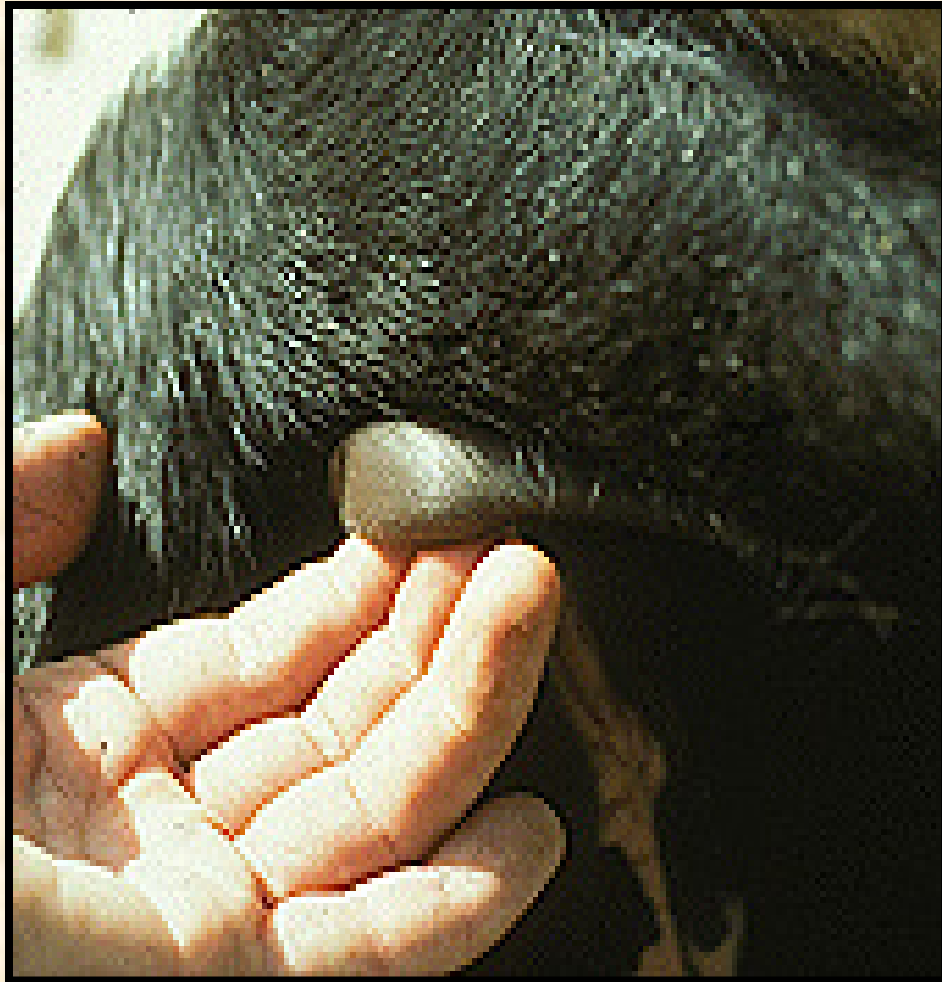


# Primary Diagnostic Tests for Cattle TB

- Caudal Fold Tuberculin (CFT) Test
- Single Cervid Tuberculin (SCT) Test (Deer)
- Cervid StatPak and DPP now available for certain species
- Comparative Cervical Tuberculin (CCT) Test
- G-Interferon Test (BOVIGAM)
- Idexx ELISA approved, use limited



# Caudal Fold Test



# Considerations when using Tuberculin



- Freezing
- Time interval for observation
  - Reader biases
  - Heat stable
  - Intradermal injection
- Ordered from the State-Federal Lab in Austin



# Considerations when using Tuberculin



## Tuberculin injection

Must use:

26-gauge 3/8" needle

Tuberculin syringe

Intradermal injections

“Bleb” is quality control

1% false positive rate normal



# g-IFN Test run at TAHC lab



Collect blood sample < 30 days after CFT test.

- Green top tube
- Whole blood
- Do NOT chill
- Must arrive in lab  $\leq$  24 hours post-collection



# Disposition of test positive cattle

Reactors-----Necropsy

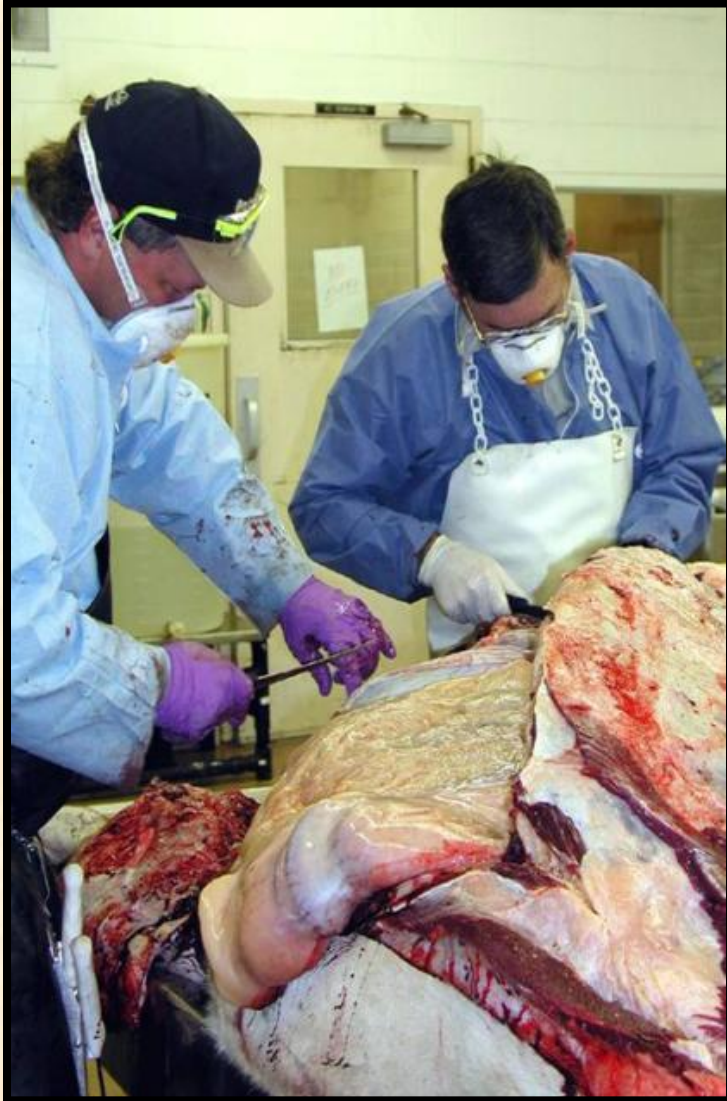
Suspects-----retest 7-14 days after initial gIFN

Necropsy if positive on second test

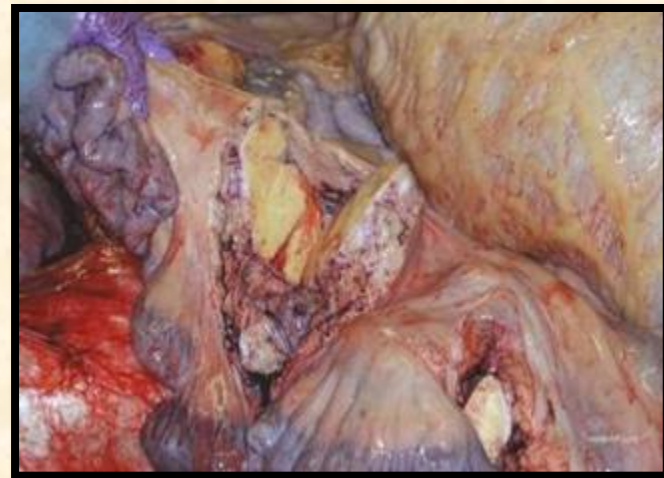


# Cattle Tuberculosis (TB)

## Public Health Concern



TB lesions usually  
detected at slaughter



# Bovine Trichomoniasis “Trich” Information for Veterinarians



# Texas Trichomoniasis Program

- Started Jan 1 2010
- Industry Driven
- Took best practices from other states
- Control concept (not eradication)
- Cow herd not regulated
- Vets must be trained
- Official labs will run regulatory tests



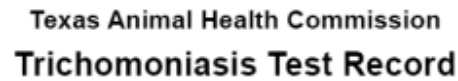


# Change of ownership

Jan 1, 2014

- Untested bulls have 7 days to go:
  - Slaughter
  - Resell through a market (permit)
  - Be tested/initiate test (permit)
  - Approved feedlot (permit)
- 60 day test validity
- 60 day virgin certificate





Accession #:

State	TAHC Area	Herd Owner	Last	First	Initial	Vet Printed Name	Vet Code	
County	Code	Route-Street-Road				Vet Signature	Specimen Collection Date	
Herd Number		Post Office - State - ZIP				Route-Street-Road	Vet Phone	
Ranch Name			NAIS			Post Office - State - ZIP	Vet Fax	
Reason for Test <input type="checkbox"/> Initial <input type="checkbox"/> ReTest				Complete herd test of all eligible bulls? <input type="checkbox"/> Yes <input type="checkbox"/> No			Remarks	
<input type="checkbox"/> Diagnostic <input type="checkbox"/> Herd Cert/Valid.				Number of bulls in herd:				
<input type="checkbox"/> Private Sale <input type="checkbox"/> Post Move Quar. & Test <input type="checkbox"/> Other (specify)				Herd Type: <input type="checkbox"/> Dairy <input type="checkbox"/> Other (specify) <input type="checkbox"/> Mixed <input type="checkbox"/> Beef				
Test Requested: <input type="checkbox"/> PCR <input type="checkbox"/> Culture								
Clinic Incubation (PCR Only): <input type="checkbox"/> None <input type="checkbox"/> 24 <input type="checkbox"/> 48				Pouch Expiration Date:				
NO.	RE-TAG?	OFFICIAL IDENTIFICATION NUMBERS		AGE	BREED	SEX	RESULTS PCR      CULTURE	REMARKS & ADDITIONAL INFO

## A Trichomoniasis Test Chart for any Trich Test


LABORATORY USE ONLY

Laboratory Performing Test:	Date Set Up:	<b>Results Summary</b>		
	Date Reported:		PCR	Culture
	Reported By:	Negative		
	Signature:	Positive		
		Total		

Copies must be distributed to: Owner, Veterinarian, Area Office



# How to find these forms

Trichomoniasis test documents and virgin bull certificates are available on the TAHC website at: [www.tahc.texas.gov](http://www.tahc.texas.gov)



The screenshot displays the Texas Animal Health Commission (TAHC) website. The header features the text "Texas Animal Health Commission" and "Serving Texas Animal Agriculture Since 1893", accompanied by a photo of a cow. A left sidebar contains a "Site Search" section with a Google Custom Search box and a "Go" button, followed by a list of navigation links: Home, Agency Information, Statutes & Rules, Rule Proposals, Entry & Show Requirements, Health Certificates, and Cattle Health Programs. The main content area is titled "Trichomoniasis" and lists "TAHC Trichomoniasis Forms" with links to "Trichomoniasis Test Record" and "Trichomoniasis Virgin Status Certification". Below this, "TAHC Information Resources" includes a link to "Trichomoniasis Brochure: Texas Cattle Trichomoniasis Regulations". A "Regulations" section at the bottom states that "Trichomoniasis regulations are now posted on the Secretary of State website." Three red arrows are overlaid on the page: one points to the "Trichomoniasis Test Record" link, another points to the "Trichomoniasis Virgin Status Certification" link, and a third, larger arrow points to the "Cattle Health Programs" link in the sidebar. A circular seal for the "TEXAS ANIMAL AGRICULTURE" is visible in the bottom right corner.

**Texas Animal Health Commission**  
Serving Texas Animal Agriculture Since 1893

**Site Search**

Google™ Custom Search **Go**

Home  
Agency Information  
Statutes & Rules  
Rule Proposals  
Entry & Show Requirements  
Health Certificates  
Cattle Health Programs

**Trichomoniasis**

**TAHC Trichomoniasis Forms**

[Trichomoniasis Test Record](#)  
[Instructions for Completing the Trichomoniasis Test Record](#)  
[Trichomoniasis Virgin Status Certification](#)

**TAHC Information Resources**

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**Regulations**

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TEXAS ANIMAL AGRICULTURE



## Texas Animal Health Commission

# Trichomoniasis Virgin Status Certificate

The animals individually identified with an official identification described below are virgin male bovine under 24 months of age *or* are between 24 and 30 months of age and breeder's veterinarian certifies that the breeder has sufficient management practices and facilities to ensure animals are virgins (veterinarian signature required). Only bulls located in Texas can be certified as virgin between 24 and 30 months of age. This extension of age does not apply to out of state bulls entering Texas.

OFFICIAL IDENTIFICATION NUMBERS	AGE	BREED
1		
2		
3		
4		
5		

**Original Breeder or Representative**

**Accredited Veterinarian**

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature *(required on all)*

\_\_\_\_\_  
Signature *(required on bulls 24-30 months of age)*

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date



# Texas Entry Requirements

Jan 1, 2014

- PCR only
- 60 day test
- No test<12mo>test
- Exhibition animals exempt for 60 days
- Permit required
- Always call state of destination for their rules



# Infected Bull?



- Reportable Disease
- Bulls only quarantined
- Positive bulls to slaughter
- 2 negative tests to release
- Trichomoniasis herd control plan



# Scabies and Mange Mites



# Scabies and Mange Mites

- Scabies and Mange Mites reportable to Texas Animal Health Commission:
  - Psoroptic Scabies
  - Sarcoptic Scabies
  - Chorioptic Mange



# Scabies and Mange Mites



# Scabies and Mange Mites

- Considerations:
  - Request for CVI on an infested or exposed show animal
  - Request for treatment on an infested or exposed show animal
  - Be aware of treatment rules and duration of treatment
  - Seasonal nature (lesions may improve in summer)





# Produced by the Texas Animal Health Commission



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